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Respectfully submitted,



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## Appendix A Marked up Version

On page 21, starting on line 16 and ending on 21:

In this library, the expected highest peaks are those representing His in the final amino acid position ( $X_2$ -His-Pro-Gln-Phe-Ala-Ala-Ala-thread (SEQ ID NO:1)). The endcapping species should make less difference (Devlin et al., *Science* **1990**, *249*, 404-406; Lam et al., *Nature* **1991**, *354*, 82-82; Schmidt et al., *J. Mol. Biol.* **1996**, *255*, 753-766). Both of these expected results are seen. Profiles for group fitness at a given position may be obtained by cyclic averaging over appropriate shorter cycle times that correspond to a given cylinder.

On page 22, starting on line 26 and ending on line 36:

A small library of 35 peptides was prepared, as ( $X_2$ - $X_1$ -Pro-Gln-Phe-Ala-Ala-Ala~thread (SEQ ID NO:2)). H-Pro-Gln-Phe-Ala-Ala-Ala~thread (SEQ ID NO:2) was prepared by couplings to the whole thread in a flask; only the  $X_1$  and  $X_2$  amino acids which constitute the library variation were added while the thread was wrapped around a cylinder. The thread was wrapped around the 5 cm circumference cylinder to couple  $X_1$ , which is chosen from (FMOC) His, Ser, Asp, Ala, Phe (denoted A-E respectively). After endcapping, deprotection, and wrapping around the 7 cm cylinder,  $X_2$ , chosen from Leu, Boc-Phe, Bz, Ac, His, Glu, Gly (denoted 1-7 respectively) was added. The Boc-Phe results in a free amine terminus, while the other amino acids, coupled as their FMOC derivatives, are N acetylated before binding studies. Fmoc deprotection and acetylation were followed by deprotection of sidechains in 50% TFA / DCM for 2 h. The library was rinsed thoroughly, blocked by incubation with 3% bovine serum albumin, and exposed to streptavidin-fluorescein conjugate. The thread was dried, and then read on the thread reader.

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On page 27, starting on line 1 and ending on line 3:

In this library, the expected highest peaks are those representing His in the final amino acid position ( $X_2$ -His-Pro-Gln-Phe-Ala-Ala-Ala-thread (SEQ ID NO:3)). The endcapping species should make less difference. Both of these expected results are seen.